What IR-4 Does for Utah

IR-4 Provides Economic Viability

The specialty food crop value in Utah is $98 million\(^1\)

– Specialty crops include most vegetables, fruits, nuts, herbs, nursery and flower crops.

IR-4’s research helped to register Section 18 Emergency Exemptions for Utah that helped prevent a loss of $11.9 million\(^2\) from occurring (see back). A registration is granted by the Environmental Protection Agency (EPA) for a particular pest control product on a specific crop. In 2003, ninety-five of the 120 Section 18 Emergency Exemptions that were converted to final registrations were credited to IR-4 by the EPA.

IR-4 Provides Research in Support of a Safe and Secure Food Supply

The Reduced Risk chemicals that IR-4 researches receive clearances from the Environmental Protection Agency (EPA), and are able to control pests that destroy crops without harming the individuals that use them, the food that is harvested, or the environment in which the crops are grown.

IR-4 Helps US Farmers Compete in a Global Economy

With farm production costs rising every day, IR-4 research helps growers stay ahead of global competition, by producing safe and effective pest management solutions for their high value specialty crops.

---

\(^1\) Source: Utah Department of Agriculture

\(^2\) Source: EPA Report

---

Major funding for IR-4 is provided by Special Research Grants and Hatch Act Funds from USDA-CSREES, in cooperation with the State Agricultural Experiment Stations, and USDA-ARS. To learn more about IR-4 programs, visit the IR-4 web site at www.ir4.rutgers.edu
# What IR-4 Does for Utah

Clearances On Some Important Utah Crops

<table>
<thead>
<tr>
<th>Crop</th>
<th>Treatments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ALFALFA</strong></td>
<td>Aluminum Phoshide, Glyphosate, MCPA</td>
</tr>
<tr>
<td><strong>APPLE</strong></td>
<td>2,4-D, Aluminum Phoshide, Codling Moth, Granulosis, Virus</td>
</tr>
<tr>
<td><strong>APRICOT</strong></td>
<td>2,4-D, Malathion, Pronamide</td>
</tr>
<tr>
<td><strong>ASPARAGUS</strong></td>
<td>2,4-D, Bacillus thuringiensis, Chlorpyrifos, Clopyralid, Dimethoate, Fluzifop, Fosetyl Al, Glyphosate, Linuron, Malathion, Myclobutanil, Norflurazon, Paraquat, Permethrin, Sethoxydim, Terbacil</td>
</tr>
<tr>
<td><strong>BEAN (DRY)</strong></td>
<td>Bacillus thuringiensis, Chlorothalonil, Cyromazine, Halosulfuron, Sodium Chlorate</td>
</tr>
<tr>
<td><strong>CANOLA</strong></td>
<td>Clopyralid, Ethalfluralin, Tebufenozide, Thiophanate-methyl, Trifluralin</td>
</tr>
<tr>
<td><strong>BROCCOLI</strong></td>
<td>Bacillus thuringiensis, Chlorpyrifos, Glyphosate, Malathion, Oxyfluorfen, Paraquat, Sodium Hypochlorite, Pronamide</td>
</tr>
<tr>
<td><strong>CANTALOUPE</strong></td>
<td>Bacillus thuringiensis, Dimethomorph, Glyphosate, Malathion, Metalaxyl + Mancozeb, Paraquat, Permethrin</td>
</tr>
<tr>
<td><strong>CARROT</strong></td>
<td>Bacillus thuringiensis, Glyphosate, Iprodione, Malathion, Metribuzin, Paraquat, Sethoxydim, Thiabendazole</td>
</tr>
<tr>
<td><strong>BRUSSELS SPROUTS</strong></td>
<td>Bacillus thuringiensis, Chlorpyrifos, Dimethoate, Endothall, Sodium Hypochlorite</td>
</tr>
<tr>
<td><strong>CABBAGE</strong></td>
<td>Bacillus thuringiensis, Chlorpyrifos, Clomazone, Clopyralid, Endothall, Glyphosate, Malathion, Methomyl, Oxyfluorfen, Paraquat, S-Metolachlor, Sodium Hypochlorite</td>
</tr>
<tr>
<td><strong>CAULIFLOWER</strong></td>
<td>Bacillus thuringiensis, Chlorpyrifos, DCPA, Endothall, Glyphosate, Malathion, Methomyl, Oxyfluorfen, Paraquat, Sodium Hypochlorite</td>
</tr>
<tr>
<td><strong>CHERRY (SWEET)</strong></td>
<td>2,4-D, Chlorpyrifos, Clopyralid, Dimethoate, Fludioxonil, Methyl Anthranilate, NAA, Permethrin, Pronamide</td>
</tr>
<tr>
<td><strong>CHERRY (TART)</strong></td>
<td>2,4-D, Clopyralid, Fludioxonil, Methyl Anthranilate, Permethrin, Pronamide</td>
</tr>
<tr>
<td><strong>CLOVER</strong></td>
<td>Bentazon, MCPA, Pronamide</td>
</tr>
<tr>
<td><strong>FIELD CORN</strong></td>
<td>Bacillus thuringiensis, Sodium Chlorate</td>
</tr>
<tr>
<td><strong>HONEY and BEESWAX</strong></td>
<td>Bacillus thuringiensis, Formic Acid, Menthol</td>
</tr>
</tbody>
</table>
Clearances On Some Important Utah Crops

HONEYDEW MELONS
Bacillus thuringiensis
Metalaxyl + Mancozeb

LETTUCE
Bacillus thuringiensis
Bifenthrin
Dimethomorph
Imazethapyr
Sethoxydim

ONION (DRY)
Bacillus thuringiensis
Bromoxynil
Chlorpyrifos
Dimethomorph
Glyphosate
Pendimethalin
Permethrin
S-Metolachlor

PASTURE GRASS
Bacillus popilliae
Bacillus thuringiensis
Diflubenzuron
Lagenidium giganteum
Methomyl

PEACH
2,4-D
Chlorpyrifos
Clopyralid
Fludioxonil
Glyphosate
Iprodione
Malathion
Permethrin

PEAR
2,4-D
Codling Moth
Granulosis
Virus

POTATO
2,4-D
Bacillus thuringiensis
Calcium Hypochlorite
Copper Complex
Sethoxydim
Sodium Chlorate
Spinosad
Sulfuric Acid
Thiophanate-methyl

PLUM
2,4-D
Clopyralid
Codling Moth
Granulosis
Virus
Fludioxonil
Iprodione
Pronamide

PEPPER
2,4-D
Bacillus thuringiensis
Metalaxyl + Mancozeb
Paraquat

PUMPKIN
Bacillus thuringiensis
Clomazone
Glyphosate
Metalaxyl + Mancozeb
Paraquat

RASPBERRY
2,4-D
Bifenthrin
Captan
Chlorpyrifos
Fenhexamid
Glyphosate
Hexakis
Malathion
Myclobutanil
Norflurazon
Oxyfluorfen
Sethoxydim
Sulfur

SAFFLOWER
Aluminum Phosphate
Methidathion
Sodium Chlorate

SNAP BEAN
Clomazone
Lactofen
Myclobutanil

SPINACH
Azoxystrobin
Bacillus thuringiensis
Cloethodim
Clopyralid Glyphosate
Malathion
Phenmedipham
Sethoxydim

SQUASH (WINTER/SUMMER)
Bacillus thuringiensis
Clomazone
Dimethomorph
Glyphosate
Metalaxyl + Mancozeb
Paraquat
Permethrin

Clearances On Some Important Utah Crops

SWEET CORN
2,4-D
Bacillus thuringiensis
Methyl Anthranilate
Propargite

TOMATO
Bacillus thuringiensis
Glyphosate
Imidacloprid
Paraquat

WATERMELON
Bacillus thuringiensis
Bifenthrin
Glyphosate
Imidacloprid
Metalaxyl + Mancozeb
Paraquat
Permethrin

Contact Information for IR-4 Regional Field Coordinators

Northeast Region
Ms. Edith Lurvey
315.787.2308
ell10@cornell.edu

North Central Region
Dr. Satoru Miyazaki
517.432.3100 ext. 150
ncrir4@msu.edu

Southern Region
Dr. Charles Meister
352.392.2399
cmeister@mail.ifas.ufl.edu

Western Region
Ms. Rebecca Sisco
530.752.7634
rsisco@ucdavis.edu

USDA-ARS
Dr. Paul H. Schwartz
301.504.8256
schwartzp@ba.ars.usda.gov
Since 1963, the IR-4 Project has cooperated with researchers, producers, the agri-chemical industry and federal agencies to secure regulatory clearances for pest management products on specialty crops.

Since 2000, over 80% of IR-4’s research effort has involved new pest management technology with biopesticides and Reduced Risk chemistries. This huge shift was a direct result of the focus IR-4 placed on advocating this new technology. It was accomplished through a three pronged approach consisting of partnering with the agricultural chemical companies, educating specialty crop stakeholders, and partnering with the EPA to facilitate specialty crop registrations.

IR-4 recognized that without access to the new technology it could not assist specialty crop growers. So they solicited industry’s willingness to work together on new product development strategies which, for the first time, included specialty crops in their development plans. The foundation for this close working relationship was crop grouping, where studies on a few key crops would allow for registration on many more crops; many of those were specialty crops.

The other aspect of IR-4’s emphasis on new technology was the educational facet. It became clear that with reduced staffs in many of the companies due to mergers, federal and state research/extension scientists were not always given the ability to test the new materials. IR-4 instituted a mechanism through publication of New Pest Control Products/Transition Solutions List to inform the public about the virtues of the new technology to assist in the transition away from Food Quality Protection Act (FQPA) vulnerable crop protection tools.

Today, IR-4 continues to work as a model government funded program due to unique partnerships formed between the USDA (CSREES and ARS), the IR-4 Headquarters and Regional staff, the land grant university system, the crop protection industry, commodity and grower groups and the EPA.

Utah Agriculture is Heavily Dependent on Specialty Crops

IR-4 thanks the entire Congressional delegation from Utah for their support.

Estimated Potential Loss Without Use of IR-4 Based Section 18s for Utah

<table>
<thead>
<tr>
<th>Crop</th>
<th>Economic Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa</td>
<td>$5,200,000</td>
</tr>
<tr>
<td>Apple</td>
<td>$6,400,000</td>
</tr>
<tr>
<td>Mint</td>
<td>$100,000</td>
</tr>
<tr>
<td>Sugar Beet</td>
<td>$200,000</td>
</tr>
</tbody>
</table>

Total $11,900,000

1 1997 Census of Agriculture
2 From 1998 to 2002